The Clinical and Business Case for Investing in Environmental Hygiene
Mark Heller, Unisource Worldwide
A Webber Training Teleclass

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February 28, 2013

Disclaimer

• I am not a certified Infection Preventionists
• I am not a certified Financial Professional
• I am Environmental Hygiene Operations Professional
  • 25 years of healthcare experience
  • lead hygiene programs in over 350 healthcare facilities
  • worked with 100’s of operations managers
  • coast to coast and multi-national clients

Today, I make my living helping healthcare leaders, across North America, improve clinical outcomes and financial performance through improvements in clinical environmental hygiene.

Agenda
Investing in Environmental Hygiene
• Traditional perspectives
• Is there a HAI problem?
• What do the experts say?
• Return on Investment
• What does good look like?
• How you can help?

Traditional Thinking
clinician – evidenced based practice

Traditional Thinking
scientist - peer reviewed study

Traditional Thinking
healthcare manager – standard or guideline

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Traditional Thinking
administrator – financial report

Is the HAI problem getting worse?
clinical rates
- Some forms of HAI’s are dropping
- Pervasive challenge contact-based pathogens
  - Clostridium difficile
  - Methicillin-Resistant Staphylococcus Aureus
  - Vancomycin-Resistant Enterococci
  - Acinetobacter
  - Norovirus
- Speed of emerging/global pathogens

Is the HAI problem getting worse?
media & public awareness

Is the HAI problem getting worse?
hospital budgets & clinical environments are under stress

Is the HAI problem getting worse?
the elephant in the room...

Not all environments are created equal

Clinical Environments
- Active Patient Treatment & Care

Non – Clinical Environments
- Public, Administrative, Support

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Not all environments are created equal
• Hand hygiene compliance will only go so far
• Intended use of the equipment & surface in the patient treatment & care process
• The proximity of environmental surfaces to the point of patient treatment or care
• Risk if C-diff infection increase if the previous occupant was infected

What do the clinical experts say?
The hygiene of the clinical environment is a matter of patient safety

A Healthcare facility is NOT a hotel
patient satisfaction driven from confidence that the environment is safe, not the decor

Watch the bottom line – cut the cleaning budget
please don’t blame the business school...

What do the Finance experts say?
Healthcare finance management association (America)

The Business Case for Investing in Infection Prevention
return on investment

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What do the ECONOMISTS say?

“Measure what matters most”

- Range of cost models and benchmarks
- A number of variables enter into the assessment
- Direct medical patient-care costs
- Indirect patient costs
- Non-medical costs
- Intangible costs
- Lack of consistency of understanding
- Generally poor cost accounting practices
- Incomplete measurement of cost and outcomes

Menu of HAI Intervention Strategies

consider the economics & unit-cost?

- Patient Re-Admission
- Antibiotic Therapy
- Intensive Care Intervention
- Extended Inpatient Stay with Precautions
- Enhanced Hand & Environmental Hygiene

...and what of the Chief Financial Officer?

SHOW ME THE MONEY!

Return on Investment (ROI)

Definition

- A performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. To calculate ROI, the benefit (return) of an investment is divided by the cost of the investment; the result is expressed as a percentage or a ratio.

The return on investment formula:

\[
\text{ROI} = \frac{\text{Gain from Investment} - \text{Cost of Investment}}{\text{Cost of Investment}}
\]

The Business Case for Investing in Infection Prevention

return on investment (ROI)

- What will it cost?
  - Identify the investments
    - Staffing (HOW will the work get done on Sunday evening?)
    - Supplies & Equipment
    - Supervision (WHO will check that it happened?)
  - What about the other cleaning staff?

- What will it save?
  - Translate the measures into lower HAI rates
  - Who will track the improvement?
  - When will the improvements begin?
  - Can the improvement be sustained?
  - Factors that drive HAI’s are interconnected (don’t over complicate this…go with what you know!)
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The Opportunity
organization-wide savings or cost avoidance

The costs of treating HAI’s are rarely identified in a single cost center; however typically include:

- Additional Medical, Nursing and Clinical Interventions
- Enhanced Diagnostics & Therapeutics
- Post Discharge Monitoring
- Increased Likelihood of Re-admission
- Additional Management Oversight
- Missed Revenue Opportunities
- Public Relations, Patient Satisfaction (HCAHPS)
- Legal & Insurance Costs

Let’s Break It Down
cost of environmental hygiene

- $10M Annual Cleaning Budget
  - Labor Cost 85%
  - Supply Cost 5%
  - Waste Management 5%
  - Other 5%

ROI calculation (this won’t hurt)

There are two phases of assessment

1. The period when upfront investment costs are not off-set by savings; this is referred to as your “investment”
2. The period when investment in enhanced cleaning are off-set by savings (lower cost of care); the degree of off-set savings is your “return”

Savings must be greater than the higher costs associated with enhanced cleaning AND allow for the payback of the up-front “investment”

Let’s Break It Down
ROI period of assessment

Let’s Break It Down
ROI calculation (this won’t hurt)

“Return” is the cumulative savings (or cost avoidance) the hospital experienced over your assessment period, after funding the higher cost AND payback of initial investment

The time it takes to pay-back the up-front investment matters

- payback of less than 24 months
- missed opportunity costs

Other Projects or Activities which could not proceed because the hospital chose to invest in enhanced cleaning

Let’s Break It Down
Example

500 Bed acute-care Hospital
Cost of Care: $80M - $100M*
Cost of HAI: $8M – $16M
Cost to clean: $8M – $10M

HAI Savings & Cost Avoidance Opportunity:
$3.2M – $6.4M

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Pitching Your Proposal

1. Define your objective
   • target Organism
   • reduction target
   • period of measure
2. Calculate the costs for enhanced clinical hygiene
   • resources to implement
   • resources to sustain
3. Determine your HAI (activity-based) cost references
4. Calculate your investment payback (weeks/months)
5. Establish your ROI objective

Pitching Your Proposal

1. Present your Economic Argument
   • Saving money will not be the main driver of decision-making
   • Making value adding investments (without spending more) will be
2. Articulate your Value Proposition (align with corporate priorities)
   • People development / patient satisfaction
   • Evidence-based investments
   • Improved performance – optimize patient throughput & clinical resources
   • Risk Management - patient and employee safety

What does a “Good” clinical environmental hygiene program look like?

• Competency
• Frequency
• Quality
• Consistency
• Verifiable Outcomes
• Adaptability
• Builds Sustainable Framework

What can you do to help?

• Demand Competency
• Coach don’t Compensate
• Don’t worry about Monday-Friday, 8-4; focus on Sunday evening!
• Get the Data
• Enter the Lions Den (aka the CFO office)
• Learn your facilities’ approach to financial valuation, return-on-investment and activity-based costing
• Get Help If You Need It

What can you do to help?

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Coming Soon

06 March (WHO Teleclass) PATIENT PARTICIPATION IN HAND HYGIENE PROMOTION AND IMPROVEMENT
Speaker: Prof. Yves Longtin, University of Laval, Canada

07 March RATIONALE AND CONCEPTS IN DENTAL INFECTION CONTROL
Speaker: Prof. Raghu Puttaiah, Managed Care Concepts

14 March UPDATE ON ‘NO TOUCH’ ROOM DISINFECTION SYSTEMS: UV LIGHTS, HYDROGEN PEROXIDE AND OZONE
Speaker: Dr Dick Zoutman, Queen’s University, Kingston

21 March TUBERCULOSIS INFECTION CONTROL IN HIGH HIV BURDENED COUNTRIES
Speaker: Virginia Lipka, CDC, Atlanta

06 March (WHO Teleclass) INNOVATION AND NEW INDICATORS IN HAND HYGIENE MONITORING

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